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RESEARCH PERTINENT TO THE TRAINING OF READING TEACHERS.

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THE IMPLICATIONS FOR TRAINING READING TEACHERS OF CURRENT DEVELOPMENTS IN TEACHER EDUCATION RELEVANT TO READING INSTRUCTION, THE CURRENT STATE OF KNOWLEDGE ABOUT THE TEACHING-LEARNING PROCESS, AND EVOLVING IDEAS ABOUT READING INSTRUCTION ARE EXAMINED. BRIEFLY DESCRIBED ARE MICRO TEACHING, VIDEO-TAPING, TIME-LAPSE PHOTOGRAPHY, CLINICAL TEACHING EXPERIENCES, AND USE OF CLINICAL PROFESSORS AND VIGNETTES OF TEACHING. ATTEMPTS TO RECORD AND CLASSIFY CLASSROOM BEHAVIOR, THE LANGUAGE USED IN THE CLASSROOM, AND THE FORM AND SEQUENCE OF LESSONS ARE CITED. THE TEACHING OF THE COMPLEXITIES OF READING, THE USE OF LEARNING MEDIA OTHER THAN READING AND LANGUAGE ARTS, AND THE CONTRIBUTION OF LINGUISTICS AND THE PSYCHOLOGY OF COGNITION TO READING INSTRUCTION ARE ALSO DISCUSSED. IT IS IMPLIED THAT THE SCOPE OF EDUCATION COURSES SHOULD BE EXAMINED TO INSURE THAT PROSPECTIVE TEACHERS ARE AWARE OF CURRENT DEVELOPMENTS, THAT THEY ARE EQUIPPED TO EVALUATE INNOVATIONS OBJECTIVELY, THAT THEY CAN TRANSLATE THEORIES INTO EFFECTIVE PRACTICE, AND THAT THEY LEARN TO TEACH DIAGNOSTICALLY AND TO DIAGNOSE THEIR OWN TEACHING BEHAVIOR. (NS)

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RESEARCH PERTINENT TO THE TRAINING OF READING TEACHERS

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The relationship between educational research and teacher education ideally should be closely integrated. Yet, in practice, the link is somewhat tenuous. The current emphasis upon educational development and innovation recognizes that if change is to occur in the schools, a truly co-operative effort is essential. However, the emphasis on the importance of continuing education through in-service training should not obscure the fact that pre-service education has traditionally spear-headed many reforms. New organizational patterns have developed within schools; there are a plethora of new materials of all types in all subject areas; and the classroom is no longer the typical milieu within which the teacher operates; all have their implications for teacher training.

This paper, however, will only examine these aspects indirectly but will concentrate upon four topics which are pertinent to the teacher education activities and to which we need to expose our future teachers of reading: first, current developments in teacher education as a whole, many of which have particular relevance for reading; secondly, the current state of our knowledge about the teaching-learning process, as this is obviously basic to anything we do in teacher education; thirdly, recent developments and innovations in the field of reading; (These will not include merely new materials and organizational schemes but will also examine evolving concepts of the nature of reading); finally, the implications of each of the foregoing for training reading teachers will be examined.

CURRENT DEVELOPMENTS IN TEACHER EDUCATION

During 1967 two books, one American and the other a Canadian, on teacher education have been published. The Phi Delta Kappan publication, Improving Teacher Education in the United States,[1] is based upon a symposium in which the content of teacher education is discussed from a variety of points of view. The Canadian publication[2] which is a summary of and reaction to the papers presented at Canadian Teachers' Federation Conference on Teacher Education, deals more with the organization of teacher education, whether an education degree should be awarded, the problems of measuring effectiveness in teaching, the benefits of internship, the benefits and drawbacks of concurrent or consecutive teacher education. These two books together present a clear picture of current problems, and contemporary suggested solutions.

But these two publications also reflect an upsurge of interest in teacher education. The public scrutiny of education is extending to every facet of the school system. In addition, the curricular developments of the nineteen fifties, led frequently by scholars from other disciplines, have frequently been revealed as being short on appropriate pedagogy. The central position of the teacher in the system has been simultaneously vindicated but also their knowledge and scholarship questioned. There is also a demand by the teachers, themselves, for a greater degree of professionalism. This is seen in the widespread involvement of teacher organizations in in-service education, and the world-wide recognition of the need for increased compulsory length of training for teachers. Finally, the results of over a decade of research into the teaching-learning are now being widely published, and these results have obvious implications for

teacher education.

All these factors are influencing current discussions on teacher preparation. The problem of the balance between general education courses and courses in pedagogy, is again being debated. The concept of internship is the basis of various experimental programs now underway. Again, the underlying concept is not a new one, but was basic to the pupil-teacher system of the nineteenth century. Internship is seen not only as more realistic than the conventional, comparatively short periods of school practice, but is also believed by many to be more functional in enabling the student to undertake successively, activities which are identical to those of the teacher. To be successful, however, internship must include appropriate sequencing as well as selection of activities. Unfortunately, in education there is no authenticated body of either empirical or pragmatic knowledge of the effectiveness of internship, comparable to that which is available in medicine. We need to know much more before we can design internship so that it will encompass exposure to ever-increasing complexity within the school situation.

Most writers on teacher education accept the common platitude that teaching is both an art and a science, but in the discussion, art is stressed at the expense of science. Unfortunately, we know little about the science - in the sense of exact knowledge - about teaching. We are hopefully in the process of liquidating part of our ignorance in this respect. Some of the experiments currently underway in the U.S.A. are examining the techniques of the craft of teaching through minute analyses of the teaching act.

It is interesting and indeed significant that the new techniques have nearly all been used at some point in teacher training institutions. The following will be discussed briefly: micro-teaching, video-taping, lapse photography and tape-recording, clinical exercises in teaching, analysis of teaching techniques, vignettes of teaching,clinical professors.[3]

Micro-teaching

This was first developed at Stanford University with the dual purpose of providing student practice before going into schools and also to provide research data on training conditions. Brief teaching sessions are video-taped and immediately played back to the trainee so that he may see how he has taught. Small groups work together, and the remainder of the group and the supervisor criticise the trainee's performance. The student may then re-teach the lesson with another group. Two main benefits that accrue from this activity are that from the beginning the trainee becomes aware of the differential effects of his teaching activities, and he also is initiated into the art of constructive self-criticism.

Video-Taping

It is becoming fairly common for education faculties to have a number of video-tapes of actual teaching situations available. These can be used for illustration of techniques or analysis of lesson planning and classroom organization. Such video-tapes are now replacing direct observation in many institutions. Another use which has been made of video-taping is to record student teaching performance. This is then viewed by both the critic teacher and the college supervisor. Not only does a greater degree of objectivity result, but the interaction in discussion of the rating appears to be mutually productive for both parties.

Time-Lapse Photography

Photographic records are made by cameras, placed strategically in the classroom at set intervals, usually at the rate of one per minute. By assembling the photographs in sequence and collating them either with tape-recordings or reports from raters, a comparatively accurate picture of the classroom activity is obtained. This method is considerably cheaper than video-taping. It permits analysis of the apparent attention level of the students as well as the shifts of activities.

Clinical Teaching Exercises

A sequence of experiences is arranged so that the trainee is exposed consecutively to more complex situations. He may begin by teaching an individual child and then gradually move to a group of two or three, then to one of eight and eventually the whole class. Or, he may undertake the teaching of one or two individual pupils and make this the basis of a detailed case study. Frequently the areas that elementary school trainees undertake are in reading or mathematics. Children who have particular problems are usually excluded for the young trainees. These activities are clinical in the sense that individualswork through one particular program and study one or two pupils in depth. This type of activity has been used in teacher training in Britain for many years, and with extended training is now being used more on this continent.

Analysis of Teaching Techniques

Research on classroom teaching has categorized classroom management activities. The routines of classroom organization, the orderly changing from one activity to another, the giving of directions, the means of coping with the practical emergencies that inevitably arise within the

teaching situation, can now be simulated. Exposure to this information will not present the student teacher with mere 'tricks of the trade', but should develop a repertoire of skills and attitudes and strategies.

Vignettes of Teaching

Short films of particular teaching activities have been made, which indicate alternative ways of dealing with classroom problems, or of presenting content.

Clinical Professors

The use of clinical professors in education whose functions are somewhat analogous to those of the clinical professors in medecine, has been mooted frequently in teacher education. It has yet to be used extensively, but it has proved successful in some places. The emphasis on the personal and individual supervision of student teachers is still one of the most efficacious means of ensuring appropriate teaching development.

These then, in summary, are some recent innovations translated from research techniques into teacher training activities. All of them have pertinence for training teachers of reading.

THE TEACHING-LEARNING PROCESS

Many of the techniques which have just been described are those which have frequently been used in research, and then adopted for teacher training. Though there has been a plethora of writings on the psychology of learning, the findings are often based on laboratory studies of animals or clinical studies of human beings, they frequently lack relevance for learning in the classroom situation. Very little has been written about group learning, though there is a body of research about group social interaction.

During the nineteen fifties, several educational researchers began to examine and analyze activities within the classroom. Though this research was initiated earlier, it has only recently been available in published form. There is not time to mention all this recent research but a small selection has been made of findings which have obvious implications for teacher education.

The Interaction Analysis Scale developed by Flanders[4] broke new ground in that it was not concerned with the content of what was being taught but focussed on the reactions of the teacher to the pupils and the pupils to the teacher. One of the problems with this type of analysis is how to objectify the recording of the many behaviors which occur in classrooms. Then having an acceptable record, the difficulties of appropriate classification emerge. The initial scale has been refined, clarified and developed further. Flanders has suggested that the primary purpose of his investigation is not merely to examine the phenomena of classroom interaction, but is rather to explore this activity as a means of improving teacher training.

The language used within the classroom has also been examined, particularly by Bellack[5] and his students. This group were the first to make extensive use of the tape recorder as the means of obtaining exact data for the basis of the analysis of the language used in teaching.

The most complete recording of classroom activity has been undertaken by Biddle[6] and his associates at the University of Missouri, who have obtained video-tapes of over 150 teachers. The sampling of behavior was carefully planned so that neither the teacher nor the children were aware when the video-taping was taking place. A mass of material concerning

classroom teaching has thus been accumulated and although preliminary analysis has been completed, much remains to be done. One of the early, interesting and potentially significant findings was the relative "smallness" of the teaching space. The movement of teachers within most ordinary classrooms appears to be very limited, and thus the inter-personal contact with pupils is lessened considerably.

Lapsed photography and tape recorders combined have been used by Gump at St. Louis[7] to record classroom behavior. He and his colleagues are now exploring the 'ecological variables' within the school situation. Smith at Kansas City has used trained observers to great effect, and has been able to report many interesting facets. For example, he has analyzed the techniques teachers use for obtaining rapport with students. Apparently a device many successful junior high school teachers use is that of 'banter'. This humorous interaction not only gains the attention of students, but is also used to relieve classroom tension.

Herbert,[8] in his book A System for Analyzing Lessons, suggests a method of analyzing, in depth, the components, the form and the sequences of a lesson. This should be read by anyone who is involved in evaluating lessons.

Up to this point, however, there have been few attempts to make explicit qualitative judgments on the qualitative aspects of teaching behavior, the main concern of the researchers being to record and classify classroom behavior objectively. Thus, though many clues to effective classroom routines and activities are given, there are no specific answers

to teacher training problems. The efforts to obtain inter-rater reliability have many implications for the supervision of teaching practice.

Taxonomies and analyses of educational objectives in behavioral terms are currently fashionable. Examinations of these and, more productively the involvement in their construction, should be basic in so called 'methods' courses. Moreover, recent attempts have been made to specify objectives in terms of tasks and problem situations with a variety of possible solutions and alternative answers. This approach, however, may be limited by the fact that the behavior involved is structured by the task denoted. At the risk of adding further complexity to this formulation of educational objectives, it would seem profitable to analyze the behavior in terms of pupil tasks and pupil variables and also teacher tasks and teacher variables. Such a clarification might lead not only to greater understanding of the teaching-learning situation, but also might pin-point deficiencies more efficiently and indicate remedies more appropriately.

We did not need research to reveal to us that a teacher most frequently uses spoken language to promote learning. What is interesting in the analysis of classroom language is the variety of diverse purposes that apparently lie behind the type of language used. The evidence suggests that the following are the main ways in which teachers use words:

1) To describe
2) To designate
3) To define
4) To narrate
5) To explain
6) To illustrate
7) To compare/contrast
8) To classify
9) To interpret
10) To summarise
11) To give opinions

Other reasons for classroom language, of course, occur but research has shown that those above occur most frequently.

These purposes behind the teacher's language are always implicit, but yet in the teaching-learning situation, reciprocity occurs. Teachers use language in these ways but also seek to develop corresponding language activities explicitly in their pupils. This latent objective needs to be examined more closely in order to explore the most effective means by which the teachers can elicit these language behaviors from the children. Awareness of the various purposes for which language is used should also assist student-teachers in improving classroom talk.

In order to understand more fully how this might be undertaken in the fields of reading and language, it is also necessary to present a brief summary of generalized purposes.

1. To utilize and extend the child's experience through language.

2. To develop competency in language. This would include fluency, 'articulacy', and precision.

3. To ensure increasing mastery of varied and appropriate language repertoires. To use and to recognize that language varies according to situations, e.g., difference between conversation and reported speech.

4. To foster language awareness. This would include linguistic understanding of the dynamics of language in use, (but not necessarily traditional grammar). Sensitivity to language usage is also part of this awareness. This would include a feeling for euphony, metaphor, the picturesque and a sense for the aptness of language.

5. To use language as a mental goad. The formulation of apposite questions is basic to enquiry, yet the language of questions is only just beginning to be explored in any depth. Children need to learn how to formulate their own questions. It should be remembered that;

   "Good questions recognize the wide possibilities of thought and are built around varying forms of thinking. Good questions are directed toward learning and evaluative thinking rather than in determining what has been learned in the narrow sense."[9]

6. To direct vocabulary development and to assist in formulating concepts by clarification through language.

7. To ensure a high level of verbal comprehension. This should include both listening and reading comprehension, and is one of the most difficult of the objectives to attain.

8. To foster critical awareness. Since most ideas have communicated through language, the ability to assess and evaluate concepts must be an integral part of a language program.

9. To integrate language activities with other areas of the curriculum. The duality of language learning must be appreciated: language is both a means for obtaining knowledge and knowledge in and of itself.

10. To develop aesthetic appreciation. This may be focussed on the cultivating tastes in literature, but should also include awareness of intrinsic elements of beauty in language. The majority of these objectives emphasize the cognitive domain of language, but in this last area the affective is stressed.

In addition to these uses of and purposes for language in the classroom, the diverse opportunities for differentiated use must be studied, too. A 'closed' situation such as programmed learning, demands a precision of response but also elicits comparatively restricted verbal reaction. An open ended dialectic discussion type situation evokes greater varieties of responses, and permits considerable diversity of language performance. Perhaps we need to examine further too, the 'nature of talk' in terms of the size of the audience, for example between individuals, within different sized groups, from two or three, to mass audiences.

It would thus seem essential that students in training and particularly those concerned with reading, need to become aware of the nature of the language interaction in the classroom and, in particular, how language is frequently the principle mediator in the learning situation. It would seem that by studying his own verbal behavior, the teacher will gain insights into his own teaching, and that by providing role playing situations the student teacher can begin to improve techniques.

RECENT DEVELOPMENTS IN READING

In this section it is not proposed to discuss recent innovations in the teaching of reading. The current N.S.S.E. Yearbook,[10] gives comprehensive and exhaustive accounts of all the major ones that have occurred in the last decade. It is proposed here to examine several aspects of our 'conventional wisdom' about reading, which seem to be shifting.

The first is concerned with the future of reading in our society and thus, by derivation, the place of reading in schools. As the writer has stressed elsewhere,[11] McLuhan and his associates, have pointed out that future civilizations are more likely to be oral cultures than book cultures. 'Oracy' rather than 'literacy' will be the predominant feature. But a frequently mistaken assumption is that McLuhan is postulating a non-literate or 'aliterate' community whereas he speaks of a post-literate world. This difference is a very real one. Though the new media stress oral communication, they in fact, assume literacy - literacy of quite a high order. These new media do not derive their inspiration primarily from an oral culture but rather from a literate and frequently literary one. They have moved on a stage perhaps to a new oracy - but this depends upon a pervasive literacy.

McLuhan, however, would suggest that there is a reason for this.

"As a simple consequence of this participational aspect of the electric technology, every kind of entertainment in the television age favours the same kind of personal involvement. Hence the paradox that, in the television age, Johnny can't read because reading as customarily taught, is too superficial and consumer-like an activity. Therefore, the high-

brow paperback, because of its depth character, may appeal to youngsters who spurn ordinary narrative offerings. Teachers today frequently find that students who cannot read a page of history are becoming experts in code and linguistic analysis. The problem, therefore, is not that Johnny can't read but that in an age of depth involvement, Johnny can't visualize distant goals." [12]

But I would like to suggest that it is reading, and particularly book reading, that will enable Johnny to visualize distant goals. Depth, complexity, involvement, and mental activity have long been recognized as the unique quality of books.

Complexity, variety, portability of books, and the individual nature of reading, all must be stressed. Of even greater import, however, appears to be the need to ensure verbal comprehension 'in depth'. This need is underlined by the fact that the recent N.S.S.E. Yearbook on Reading, deplores the paucity of attention that has been and is being given to the complexities of reading beyond the beginning stage.

It will be a great disservice to education in general, and to reading in particular, if we continue to operate on the assumption that reading will be the prime way of learning. Other learning media must be linked with whatever we are undertaking in the language and reading program. Until comparatively recently, these technological inventions have been considered only as additional aids, but it seems likely that they become a hub around which all other teaching revolves. Many of these new inventions, however, do demand the ability to read, though the appropriate reading skill may be specific to the individual new technique.

It must be remembered too, that the new inventions of film, radio and television are also languages; their syntax and grammar are as yet unknown. Each codifies reality differently and each medium undoubtedly

conceals its own unique metaphysics. And we are just beginning to explore the grammars of these new languages and see the possibilities of them for enlarging and extending the type of experiences today's children undergo. And so we are moving from using films merely as visual aids towards children producing their own film to indicate their interpretation of reality. My most vivid aesthetic experience recently was a three and a half minute film produced by two seventh grade boys. It was an animated colour abstract called "Conflicting Colours." It contained over 1500 frames and took twelve hours to make. Many such experiments are being carried out in the Toronto metro area of North York, under the leadership of Mrs. Roberta Charlesworth. Modern children may often find themselves more articulate in media other than the language of words.

McLuhan has suggested that while other media present multiple perspectives, print is linear in form and format. The physical impact of print in line sequence is important - and this is true of the printed form of any language whether we read from left to right, right to left, horizontally or vertically. But not only does the print induce a linear sequence but ideas are also presented in this way. As Carpenter has written:

> "Gutenberg completed the process. The manuscript page with pictures, colours, correlation between symbol and space, gave way to uniform type, the black-and-white page, read silently, alone. The format of the book favoured lineal expression, for the argument, like the moving eye of the reader, ran like a thread from cover to cover; subject to verb to object, sentence to sentence, paragraph to paragraph, chapter to chapter, carefully structured from beginning to end, with value embedded in the climax. This was not always true of great poetry and drama, which often retained multi-perspective, but it was true of most books, particularly texts, histories, autobiographies, novels. Events were arranged chronologically and hence, it was assumed causally; relationship, not being, was valued. The author became an authority; his data were serious, that is, serially organized. Such data, if sequentially ordered and printed, conveyed value and truth; arranged any other way, they were suspect." [13]

There tends to be a derogatory tone implied when books are discussed as merely linear. However, this linear quality is, perhaps, the greatest contribution books have to offer. Patterns created by lines are numerous, almost infinite - but the lines indicate relationships. The visual phenomenon of television is produced by patterns of lines. Basic to men's questing for knowledge is his desire to seek to understand relationships between phenomena, people, ideas and visions, to understand the reasons 'why'. It is books which are the storehouses of individual and communal understandings of these relationships. Print in linear form is still the best way of communicating these relationships. Thus, it is imperative that reading is taught so that the links between concepts, ideas, feeling and opinions become explicit for the reader. It is a truism that reading is not a subject but is a facilitating skill. The substance of knowledge about reading is derived from many disciplines, and these sources are becoming more diverse. One of the features of the past decade has been that an increasing number of disciplines are making significant contributions. It may be, too, that we in reading, should make demands on these disciplines in terms of posing problems to which we need answers. The contribution of three disciplines only will be examined: linguistics, psycho-linguistics, and psychology of both cognition and affect.

In the past decades, books and articles by linguists have had significance for the field of reading. Most of the discussion has centred on the problems of decoding and, in particular, the grapheme-phoneme relationship. The insights thus gained may enable us to produce a more economical means, in terms of both time and effort, of ensuring success in beginning reading. However, the potential contribution from two other linguistic branches seems to be equally great, particularly for comprehension. The work of both the structural and the transformation linguists may assist us, that of the former by clarifying the ways in which the structure of the language effects meaning, and the latter by revealing how meaning becomes embedded in

language. In addition, the work of Abercrombie [14] has suggested some of the major differences between spoken language and written language. These differences, coupled with the increasing complexity of the concepts presented, may be a major cause of difficulties in reading comprehension at later grades.

Psycho-linguistics, a fusion of psychology and linguistics, is a comparatively new area of study but it is already providing information that is pertinent to reading. Levin Gibson and their associates, are working on "Project Literacy" [15] at Cornell University. They are carrying out systematic, longitudinal studies. In their experiments, they are attempting to differentiate between the decoding problems, and those problems which involve progressively higher order units of language structure with attendant problems of meaning.

Currently, there is extensive investigation of the relationship between language development and cognitive development in children by several schools of psychology. Their findings may be synthesized in the following analogy recently expressed elsewhere by the writer[16]. The nature of language development is both centripetal and centrifugal in function. In the early stages of language development, there is a vortex in which all experience is sucked in, and enlarges the language reservoir, but the reservoir having reached a certain level, inertia does not set in. Language now becomes the driving force which extends experiences, in fact often is an experience in its own right. One of the greatest paradoxes of language is that it simultaneously combines both efferent and afferent activities. Too often, we categorize language as a tool or agent for obtaining knowledge, forgetting that it is also an experience in itself. To avoid stagnation, the reservoir must maintain a constant flow.

Consideration, however, of the purely cognitive aspects of language is not enough. Language also covers the affective domain. This quality is basic to aesthetic appreciation, but is also present in reader reaction to the majority of material that is read, and somehow we need to become more aware of this in our teaching of reading.

The psychological debate between the respective functions of discovery learning and reception learning is also of interest. Reading is obviously mainly reception learning, but frequently will also involve discovery, if the reader assimilates new concepts, becomes aware of new relationships, and enhances his own experience in some way.

These, then, are a few of the evolving ideas of which we, as trainers of reading teachers, should be aware. But now let us examine, more directly, the implicationsfor teacher education.

IMPLICATIONS FOR TEACHER EDUCATION

Arising from the previous discussion, innumerable implications occur. Time permits the examination of only five.

It is imperative that we ensure students have adequate knowledge of recent developments, both in substantive and pedagogical fields. Future teachers need a wide liberal education, but this should be organized so that it is not completely unrelated to their future vocation. It would seem to be possible to organize courses which have sound substantive content, but are also pedagogically pertinent. For example, a course in linguistics seems to me essential for future reading teachers, but such a course, while sound linguistically, should also contain elements which are apposite for education. We shall need to work co-operatively to obtain such courses, but the result will be worthwhile.

The scope of education courses needs also to be examined to ensure that teachers are better equipped to evaluate and, examine objectively, innovations in the future. It appears that the rate of change is not likely to diminish

If we are to withstand commercial pressures and to prevent a constant impact of "band-wagons," our teachers must become more sophisticated in their assessments of new programs.

Analysis of the place of reading in the future, both in and out of schools, should enable us to set our objectives more definitively and plan learning situations more appropriately. We must devise schemes, strategies and stratagems whereby we ensure that our training is realistic. It is a commonplace that education students rate school practice as the most significant part of their training. Moreover, it is vital that we ensure that future teachers will translate the theory they assimilate into effective practice. A recent study by Regan [17] revealed that the professed knowledge of child development had very little impact on teaching behavior. All the newer techniques and devices suggested in the first section of this paper should be incorporated into education courses. There is a need for teachers in training to be provided with opportunities and for practising desired behaviors in a variety of role playing situations. There is also some evidence that by studying his own verbal behavior, the teacher gains insight into his own teaching. From the onset, teacher education should be creating a teacher who is capable of professional self-renewal throughout his career and thus, it is essential to induce an attitude of constructive self-criticism in all prospective teachers. The teacher must be a continuous learner. While in the classroom, an effective teacher is also being a learner. This learning process is not identical with that of his pupils, but his ability to assess his own teaching performance should lead to continuous monitoring of his classroom behavior.

The extensive repertoirs of roles which the teacher must play in the classroom should be explored, in depth, with students. Not only is he a learner, the teacher must also be an interpreter, a resource person, a motivator, a contriver, a model (particularly as a learner) - to name but a few. Each of these 'labels' implies certain activities, expectations and reactions on the part of the teacher. Exploration of the dimensions of these roles would undoubtedly suggest many varieties of role playing which could be devised. An important corollary of this is to examine the types of teacher behavior which might curtail or inhibit learning.

As longer periods of teacher training are introduced, we need to sequence activities so that progressive self-awareness will be indicated by increasing competence. When the period of training was comparatively short, it was necessary to concentrate on "how to do it" rather than "why to do it" courses. We must ensure that students learn to teach diagnostically, and in turn, induce diagnostic learning in their pupils. But the diagnosis should also focus on their own teaching behavior so that they can assess their progress appropriately and plan future activity more successfully.

Of all the many definitions of teaching, perhaps the simplest, that of "causing to learn" is the most apt. In teaching future teachers, the models presented within the pre-service institutions have significant influences on their future behavior. Perhaps the talking needs to be minimized and activities involving more realistic situations increased, though there may be some adverse reaction, initially, on the part of students. This is not an easier way of learning, and there is sometimes reluctance to the exposure involved in such methods. However, whatever the level of teaching, whether in schools, in teacher education institutions, in in-service situations, wherein we want to cause learning, our motto should be "do as you would be done by."

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